

CREATIVE PEOPLE TEND TO TELL LIES, ESPECIALLY IN ENRICHED ENVIRONMENT

Shia-Wen Chan

Wan-Qing Tan

Chee-Seng Tan

*Department of Psychology and Counselling
Universiti Tunku Abdul Rahman (Kampar campus)*

ABSTRACT

Is dishonesty affected by one's creativity and environment? Recent studies have documented the effects of creativity and environment on dishonesty respectively. However, little attention has been given to the interaction effect of creativity and environment. Based on past findings, we hypothesized that creative people, compared to their non-creative counterparts, may tell more lies in an enriched (vs. scarce) environment. An experiment was conducted on a sample of 97 undergraduate students to examine the moderation effect of environment on the linkage of creativity and cheating. Participants completed a creativity task and a questionnaire on general knowledge about Malaysia. Two-way ANOVA analysis showed that creative participants, as well as those in the enriched environment, were more likely to tell lies than their counterparts. More importantly, the interaction effect of creativity and environment was statistically significant. Specifically, the creative people were more likely to cheat in the enriched environment than in the scarce environment. The results not only shed light on the link between creativity and dishonesty but also suggest a new direction for minimizing dishonesty behaviours.

Keywords: *dishonesty; malevolent creativity; environment; moderation; Malaysia*

INTRODUCTION

Creativity has long been a much sought after skill for individuals, organisations, and societies (Gino & Ariely, 2011). Creative problem solving is a skill that can produce new products and services, thus creating jobs for others (Sternberg, 1999). Creative people are flexible to take into account of different possibilities and hence are likely to solve problems effectively (Flach, 1990; Goldenberg & Mazursky, 2000). The significance of creative thinking for the human development and adjustment is probably the reason why researchers have been gripped for many years in understanding the development and enhancement of creativity (Simonton, 2003).

Creativity has often been associated with productivity, expressiveness, and the ability to think outside the box (Harris & Reiter-Palmon, 2015). However, recent literature has shown that creativity can have a "dark side" (Cropley et al., 2010), and this "dark side" can be used toward harmful ends (Cropley, Kaufman, &

Cropley, 2008). For instance, Gino and Ariely (2011) found that the drive to think unconventionally was linked with low level of honesty and a high ability to give grounds for one's own misconducts.

Dishonesty, lying, or deception, is a deliberate effort to deceive others. Typically, lying is assumed to be abhorrent and selfish because it hurts and exploits others in order to escape the consequences of offences (DePaulo et al., 2004). Recently, studies on the environmental effects on lie detection have attracted the attention of the fields of social psychology and forensic. Brinke, Khambatta, and Carney (2015), for example, found that sparse, impoverished, scarcely endowed environments would decrease the ability to successfully lie by creating a sense of discomfort and powerlessness, as compared to enriched environments.

Taken together, the two areas of studies suggest that environment may play a moderating role in the relationship between creativity and lying behaviour. Specifically, it is hypothesized that creative people are more likely to lie

in an enriched environment than in a scarce environment. However, little attention has been given to understand the theoretical moderating effect of environment on the creativity–lying linkage. The present study attempts to address this gap by examining the interaction effect between creativity and condition of environment (scarce vs. enriched) on lying.

Creativity

Creativity is the capability of producing novel and useful products (Runco, 2004). Novelty, or originality, alone is essential but not sufficient for creativity. Creative products must be original and effective (Runco & Jaeger, 2012). The ideas and products should be valued by society to be labelled effective (Crompton et al., 2008). Creativity is multifaceted and reveals itself in many ways, some positive and others negative. James, Clark, and Cropazano (1999) made a distinction between positive and negative creative thinking. According to their study, both forms of creativity can be differentiated based on the type of desired outcome. In other words, creativity can be utilised to invoke harm or blessings, depending on one's intention. Think Picasso, Shakespeare and the beautiful art and literature pieces they blessed the world with. These creative products, along with their creators, have brought much joy, entertainment, amusement, and beauty; making the world an appreciative place to be. On the other hand, creativity can also be used by an employee to steal company secrets to sell to its competitors, with the deliberate intention of harm. The employee is then expressing malevolent creativity in the process of reaching his immoral goals.

Lies in Social Life

People tell one or two lies on average everyday (Feldman, Forrest, & Happ, 2002). Most lies are told about one's emotions, likings, attitudes, and thoughts. Lies about accomplishments and let-downs are also unexceptional (DePaulo et al., 2003).

DePaulo and Kashy (1998) conducted a study to determine what people think about the lies they tell routinely. The results suggest that people show little remorse or regret about their lies. In fact, little time is spent on planning the lies or feeling anxious about the chances of getting caught.

Despite the insignificant distress felt about their lies, people do feel discomfort when lying. In addition, liars confessed that conversations in which lies were told were shallower and less enjoyable than social interactions in which only truths were involved (DePaulo et al., 2003). Furthermore, when lying, people create a misalignment between their actions (e.g., lying) and internal desires (e.g., the desire to tell the truth). This creates a psychological threat for them as well as a sense of dissonance (Ruedy et al, 2013).

Creativity and Dishonesty

Although a large number of studies have documented a positive effect of creativity on human performance and survival of organizations, recent studies have found that the ability to think unconventionally is associated with unethical behaviours (e.g., Mai, Ellis, & Welsh, 2016; Walczyk, Runco, Tripp, & Smith, 2008).

Gino and Ariely (2011) postulated that “a creative personality and creativity primes promote individuals' motivation to think outside the box and that this increased motivation leads to unethical behaviour” (p. 2). Gino and Ariely conducted a series of study to test their hypotheses. In Experiment 1, for example, Gino and Ariely asked participants to report their intelligence and creativity (a week before the experiment) and administered three tasks—perception task, problem-solving task, and multiple choice task—during the experiment to assess participants' dishonesty. In the problem-solving task, participants were given a worksheet that showed 20 matrices composed of 12 three-digit numbers (e.g., 578) and were instructed to identify any two numbers in a matrix that summed up to 10 as many as they can in 5 min. Participants received monetary reward (\$0.25) for each correct answer. However, it was impossible to solve all the questions in the given duration. Dishonesty was assessed by asking participants to report their performance score on a collection slips. The researchers “changed the last two digits in one of the matrices on the worksheet and in the example provided on the back of the collection slip” (p. 5) for them to assess dishonesty behaviour by comparing actual to reported scores. Analysis showed that dispositional creativity has significant and positive effect on

dishonesty after controlling for the impact of intelligence.

Across five studies, Gino and Ariely (2011) found that participants who scored high on divergent thinking test (i.e., creative individuals) are more likely to display dishonesty (Study 1) and creativity can forecast cheatings better than intelligence (Study 2). Moreover, participants showed greater dishonesty when creativity was stimulated temporarily (Study 3), and creative individuals were able to think of reasons to justify their dishonest behaviours (Study 4). Finally, dispositional creativity was found to moderate the impact of priming of creative mind-set on dishonesty. Specifically, when creativity was experimentally induced using a scrambled sentence test, individuals who scored low on the aggregated dispositional creativity score (measured by three creative personality scales) demonstrated greater cheating. The effect, however, was not observed on those who scored high on dispositional creativity.

Environment and Dishonesty

A growing number of studies have found that environment may influence individuals' performances. For instance, green environment restores attention and improves well-being, which in turn may increase memory (Berman et al., 2008). Similarly, people who live in rural areas have better selective attention compared to urban area residents (De Fockert et al., 2011). In addition, intricate visuals and disturbing noises in the environment are found to have negative impact on long-term memory (Wais & Gazzaley, 2014).

Knight and Haslam (2010) found that an enriching space develops psychological needs which bring comfort and motivation to others. Indeed, a decorated space can be beneficial to human psychological well-being (Haslam & Knight, 2006; Myerson, 2007; Zelinsky, 2006). In contrast, a poorly decorated space may give people a sense of low-autonomy and increase pressure (Karasek, 1979).

Drawing on the past findings, Brinke et al. (2015) examined the impact of environment (physically scarce vs. enriched) on capacity to tell lies. In three studies, Brinke and colleagues found that people in the scarce environment

(vs. enriched) told more lies (Study 1) and reported a lower level of comfort. The uncomfortable feeling was positively correlated with feelings of powerlessness, which in turn, decreases the ability to deceive successfully (Study 2). Finally, it was also found that the percentage of accuracy in detecting liars in the scarce environment is higher than in the enriched environment (Study 3).

Brinke and colleagues' (2015) findings indicate that the environment does have an impact on unethical behaviours. Specifically, enriched environment increases the ability to tell lies whereas a scarce one decreases that ability. This is because people tend to feel powerless and uncomfortable in scarce environments. This feeling of powerlessness then reduces lying behaviours. In addition, when the environment is empty or undecorated, people feel anxious easily and are weak in controlling their behaviours and cognition. On the contrary, people are less likely to be exposed of their deception when they lie in an enriched environment. This may be due to the ability of enriched environments to reduce the stress caused by lying, hence giving them calmness to control their behaviour and psychological tension (Brinke et. al., 2015).

The Present Study

The current study seeks to examine the moderation effect of the environment on the relationship between creativity and dishonesty. Prior research has found that creativity increases dishonesty, and environment may weaken one's lying ability (Brinke et. al., 2015; Gino & Ariely, 2011). Therefore, we hypothesized that creative people are more likely to tell lies in an enriched environment than in a scarce environment.

METHOD

Participants

A total of 97 undergraduate students (70 female) participated in the experiment in exchange for course credit. Participants' age ranged from 18 to 25 years old ($M_{age} = 21.4$, $SD = 0.96$). The present study used a 2 (creativity: high vs. low) x 2 (environment: enriches vs. scarce) between-subject design. Creativity

and condition of environment served as independent variables, while lying served as the dependent variable.

Measurements

Duncker's Candle Problem (Duncker, 1945). This is a creativity test designed to assess creative insight, that is, the ability to discover the different ways to use an object to solve a problem. During the task, participants were shown a picture of a candle and a box of tacks and matches on a table. They were told to attach the lighted up candle to the wall by using the objects provided, without dripping any wax on the table and floor. Participants who managed to solve the task correctly were deemed as creative.

Questionnaire on the General Knowledge of Malaysia (Masri, 2012). This test consisted of 50 questions about the facts of Malaysia. The sample items are "Is it true that Malaysia has 14 states?" and "Is it true that the Mapping and Survey Department has been maintaining the Sultan Abdul Samad Clock Tower for 108 years?" Participants were required to respond "true" or "false". We assigned one mark for each correct response. The possible score ranged from 0 (unable to answer any questions) to 50 (able to answer all questions correctly). The main purpose of this questionnaire was to examine the tendency of participants to cheat in order to obtain the offered reward (RM20 Starbucks card). Further details were discussed in the Procedure part.

The Environment. The environment condition was manipulated to examine if the presence of decorations would affect the participants' cheating behaviour. In the enriched environment, the tables were decorated with a cloth overlay and a miniature, topped with the questionnaires and a pencil. On the contrary, the tables and walls were bare in the scarce environment condition.

Procedure

The experiment was conducted in a group of four to six students. The participants, however, completed the task and survey individually in a cubicle. The sequence of the environment conditions (scarce vs. enriched) was randomly determined. Participants who attended the

same session were assigned to the same environment condition. For example, the participants of the first session were assigned to the scarce condition, while the students in the second session were assigned to the enriched condition. All participants were told that the study aimed to investigate the relationship between creativity and intelligence quotient.

After obtaining their consent, the participants were given 10 min to solve the Duncker's candle problem. After that, the experimenter handed the general knowledge of Malaysia questionnaire to participants and told them to answer as many questions as possible in 10 minutes. Participants were also reminded that a RM20 gift card will be awarded to the individual with the highest score.

Experimenter entered the room again after 10 minutes and gave the participants an answer sheet each. Participants were asked to transfer their answers from the questionnaire to the answer sheet to facilitate the marking. This is to allow participants to cheat because correct answers were lightly marked on the provided answer sheet. In order to make the participants feel safe to cheat, they were instructed to hand in only the answer sheet to the experimenter. Their questionnaires were to be thrown into the recycle bin at the exit. Nevertheless, minor and implicit marks were placed on their questionnaires and answer sheets for experimenter to match the two documents. Cheating was assessed by the number of discrepancy between the actual score (i.e., number of correct answers in the questionnaire) and reported score (i.e., correct answer reported in the answer sheet). Specifically, participants are considered lying when they marked a wrong answer in the questionnaire but selected the correct answer in the answer sheet. Before the participants left the room, another experimenter debriefed the participants the actual purpose of the research and the assessment of dishonesty. Participants were ensured that their responses are confidential and the reward is valid and based on their answers on the questionnaire. None of the participants wanted to withdraw their responses after knowing the actual purpose of the study.

RESULTS

A two-way ANOVA was conducted to examine the effects of environment and creativity on lying. Table 1 shows descriptive statistics for the four groups. The analysis identified a significant main effect of environment, $F(1, 93) = 8.97, p = .004, \eta_p^2 = .09$. Participants in the en-

riched environment ($M = 6.94, SD = 7.14$) reported higher score than those in scarce environment ($M = 3.19, SD = 5.74$). The main of creativity was also statistically significant, $F(1, 93) = 12.98, p = .001, \eta_p^2 = .12$. Compared to less-creative counterparts ($M = 2.78, SD = 4.15$), the creative participants ($M = 7.24, SD = 7.87$) were more likely to tell lies.

Table 1. Mean and standard deviation for each subgroup

	Scarce			Enriched		
	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>
Less-Creative	3.14	3.51	22	4.38	4.66	24
Creative	5.12	7.10	25	11.15	7.41	26

The main effects, however, were qualified by the interaction between environment and creativity, $F(1,93) = 3.943, p = .05, \eta_p^2 = .04$. The results indicated that environment does have a

moderation effect on creativity and lying. Specifically, in the enriched condition, creative students tend to have greater cheating than less-creative students (see Figure 1).

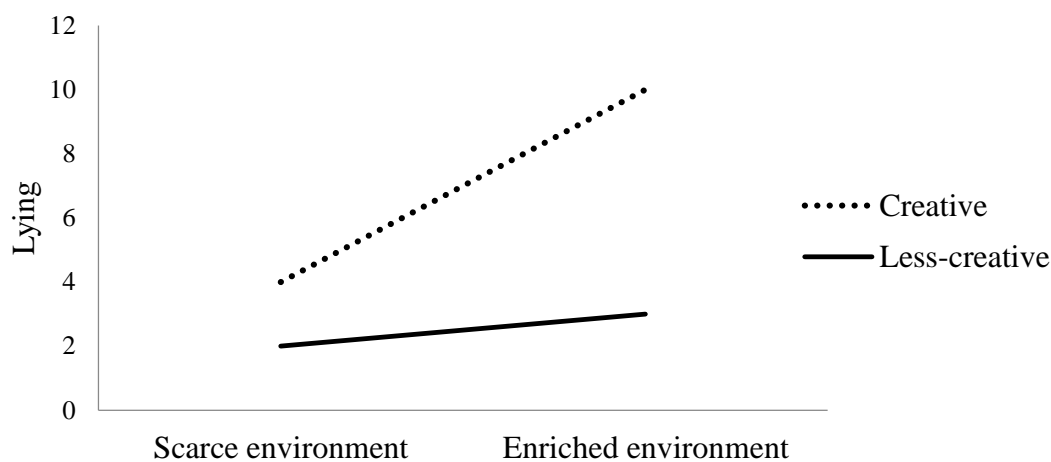


Figure 1. Line graph showing the interaction effect of environment and creativity on dishonesty.

Pairwise comparisons with Bonferroni correction were conducted to further examine the simple effects. Comparison of dishonest behaviour between the creative and less-creative groups in scarce environment condition found no significant difference. The result indicated that scarce environment plays no effect on one's dishonest behaviour, regardless of their creativity. On the other hand, in the enriched environment condition, creative groups reported statistically higher score than the less-creative group ($p < .001$). In other words, enriched environment encourages creative individuals to cheat.

Analysis on the less-creative group found no significant difference between the scarce environment and enriched environment groups. On the contrary, significant difference was observed between scarce and enriched environment among creative individuals. Specifically, the *creative/enriched* group demonstrated more cheating than the *creative/scarce* group, $p = .001$. In other words, creative individuals are more likely to behave dishonestly in an enrich environment than in a scarce environment.

DISCUSSION

Creative thinking is often associated with potential and real benefits. For instance, creativity is associated with personal satisfaction and happiness (Tamannaefar & Motaghedifard, 2014) and many theories of giftedness incorporated creativity as a core component (Kaufman, Plucker, & Russell, 2012). This study, however, challenged the common understanding that creativity is always positive. We replicated past findings and demonstrated that creativity is also linked with dishonesty. In other words, the creative ones are able to see loopholes in ethics (Gino & Ariely, 2011) and may use that ability to lie for their advantage.

It is important to note that dishonest behaviour is not affected solely by creativity. Consistent with prior studies (e.g., Brinke et al., 2015), our results show that people are more likely to cheat in an enriched environment than a scarce environment. According to Brinke and colleagues, this could be due to a scarce environment—condition that lacks of objects and textures—induces feelings of discomfort and powerlessness, which will then decrease ability to lie effectively.

The main novel finding of the present study is that environment moderates the relationship between creativity and cheating. Specifically, creative individuals displayed a significant increase in dishonest behaviour in an enriched environment. In other words, an environment with rich textures may further stimulate creative people to utilise their unconventional thinking to discover and use the loopholes in ethics to achieve their goals.

The present study has several implications. Theoretically, the findings dim the light of the creativity-is-good view. Results of this study provide support to the new insight that creativity has a potential dark side. Our research offers additional evidence for the occurrence of malevolent creativity (Beaussart, Andrews, & Kaufman, 2010). Practically, our findings suggest that a scarce environment may act as a suppressor of the relationship between creativity and dishonesty. In other words, one of the possible ways to mitigate dishonesty is to strip the person's environment of its richness; that is, surround the person with minimal textures,

colours, and objects. Future studies are encouraged to further investigate whether and how a scarce environment may inhibit people to utilize their creativity for unethical behaviours.

Although the present study has significant contribution to literature, the results of this study shall be interpreted with caution due to several limitations. First, this study was carried out on a relatively small sample size. Hence, it is highly recommended that future endeavours replicate this study with a larger sample size. Similarly, it remains unclear whether the findings can be generalized to other contexts, such as the misconduct and unethical behaviours in organizational setting. Future studies are warranted to replicate the findings on different population and scenarios. It is also theoretically and practically important to further understand why creative people tend to cheat in an enriched environment. One of the possibilities is that a scarce environment makes people feel uncomfortable and powerless (Brinke et al., 2015). Researchers may examine whether perception of power plays a significant role in the relationship between creativity and dishonesty.

CONCLUSION

Recent studies have documented that a creative individual has a higher tendency to behave dishonestly than a less-creative person. The present study shows that this relationship is further enhanced when people are surrounded by an enriched environment, while the creativity-dishonesty relationship is toned-down in a scarce environment. It is hoped that the findings may stimulate more attention to understand the linkage of creativity and dishonesty.

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